Remarks

Upon entry of this amendment claims 15 and 62-66 are pending in the instant application. Claims 15 has been amended. Claims 63-66 are new.

1. Claim Rejections- 35 U.S.C 112, first paragraph

Claims 15 and 62 are rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement. According to the Examiner, although the specification enables methods of using the ZNFN3A1 protein of SEQ ID NO: 2, it does not reasonably enable ZNFN3A1 proteins having 2 or more substitutions, partial peptides of SEQ ID NO: 2 or ZNFN3A1 proteins encoded by DNA that hybridizes to SEQ ID NO: 1.

Claim 15 has been amended to delete the phrase "or fragment thereof". Accordingly, claim 15 is directed solely to the sequence set forth in SEQ ID :2, for which the Examiner has stated meet the enablement requirement. Applicants request that this rejection be withdrawn.

Claim15 has been rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement. According to the Examiner, although the specification enables methods of screening RNAi that inhibit the activity of the ZNFN3A1 protein of SEQ ID NO: 2, it does not reasonably enable methods of screening for any other compound. According to the Examiner, since inhibition of cell proliferation cannot be linked to ZNFN3A1, there is a possibility that compounds that inhibit cell proliferation but do not inhibit ZNFN3A1, might be selected by the claimed method.

Applicants have amended claim 15 to expressly include comparison to a control. Specifically, claim 15 has been amended to require that the control cells do not express SEQ ID NO:2 and that only compounds that inhibit proliferation in cells expressing SEQ ID NO:2 and not in cells that do not express SEQ ID NO:2 are selected. Thus, there is no possibility of selecting a compound other than a compound that inhibits ZNFN3A by the currently claimed method. Support for this amendment can be found at Example 4 of the instant specification. (which compares proliferation of cells transfected with sense ZNFN3A1 with those transfected with antisense or no ZNFN3A1). New independent claims 63 and 65 further require that the test compound specifically binds to or inhibits the expression of SEQ ID NO:2. Applicants request that this rejection be withdrawn.

2. Claim Rejections - 35 U.S.C. §112, second paragraph

Claims 15 and 62 stand finally rejected 35 U.S.C. § 112, second paragraph, as being indefinite. According to the Examiner, the first recitation in claim 15 of the phrase "the proliferation" (see step (b)) lacks antecedent basis. Applicants have amended step (b) of claim 15 to simply refer to "proliferation". Applicants submit that claims 15 and 62 as amended are definite. This rejection should be withdrawn.

3. Claim Rejection- 35 U.S.C. §102(b)

Claim 15 has been rejected 35 U.S.C. § 102(b) for being anticipated by Shiff et al. (JCI, Vol. 96, 491-503, 1995: "Shiff"). According to the Examiner, since HT-29 colon cancer cells inherently express SEQ ID NO: 2 (ZNFN3A1), Shiff's disclosure of culturing HT-29 cells in the presence of sulindac and sulindac sulfide and subsequent evaluating the effects of each compound on HT-29 proliferation constitutes an inherent anticipation of the presently claimed invention. Applicant's disagree to the extent this rejection applies to the claim as amended.

As discussed above claim 15 has been amended to require the use of cells that express ZNFN3A1 in combination with control cell that does not express ZNFN3A1. Claim 15 further requires the step of selecting test compound that reduces proliferation in cells expressing ZNFN3A1 and not in cells that do not express ZNFN3A1. Thus, only anti-proliferative compounds that decrease the expression or activity of ZNFN3A1 are selected for in the claimed methods. Shiff does not teach the step of comparing the effect of a compound on proliferation in a cell that expresses ZNFN3A1 to one that does not. Accordingly, Shiff does not anticipate claim 15 as amended.

3. Claim Rejection- 35 U.S.C. §102(e)

Claims 15 and 62 have been rejected 35 U.S.C. § 102(e) for being anticipated by Costa et al. (US 2003-0157531; "Costa"). According to the Examiner, since HCT116 cancer cells inherently express SEQ ID NO: 2 (ZNFN3A1), Costa's disclosure of culturing HCT116 cells in the presence of siRNA compounds and subsequent evaluating the effects of each compound on HCT116 proliferation constitutes an inherent anticipation of the presently claimed invention.

As discussed above claim 15 (and 62) has been amended to require the use of cells that express ZNFN3A1 in combination with control cell that does not express ZNFN3A1. Claim 15 further requires the step of selecting test compound that reduces proliferation in cells expressing ZNFN3A1 and not in cells that do not express ZNFN3A1. Thus, only anti-proliferative

compounds that decrease the expression or activity of ZNFN3A1 are selected for in the claimed methods. Costa does not teach the step of comparing the effect of a compound on proliferation in a cell that express ZNFN3A1 to one that does not. Accordingly, Costa does not anticipate claim 15 as amended.

CONCLUSION

Applicant respectfully submits that the pending claims are in condition for allowance. If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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